

## REMARKS

Upon entry of the present amendment claims 1, 3-5, 7-10, and 12-23 are pending in the application. Claim 23 has been amended in an effort to better delineate the invention. Applicants respectfully request entry of this amendment.

Amendments to, cancellation of, and additions to, the claims, as set forth above, are made in order to streamline prosecution in this case by limiting examination and argument to certain claimed embodiments that presently are considered to be of immediate commercial significance. Amendment or cancellation of the claims is not in any manner intended to, and should not be construed to, waive Applicants' right in the future to seek such unamended or cancelled subject matter, or similar matter (whether in equivalent, broader, or narrower form) in the present application, and any continuation, divisional, continuation-in-part, RCE, or any other application claiming priority to or through the present application, nor in any manner to indicate an intention, expressed or implied, to surrender any equivalent to the claims as pending after such amendments or cancellations.

**1. Rejection of claims 1, 3-5, 7-10, and 12-23 under 35 U.S.C. §103(a), as obvious over Hellmann et al. (US 2003/0105230), hereafter "Hellmann".**

The Office Action rejects claims 1,3-5, 7-10, and 12-23, asserting that "Hellman et al. teaches a modular system comprising: A) at least one base module containing at least one binder, optionally together with conventional organic solvents, B) at least one adhesion module containing at least one adhesion-promoting component optionally together with conventional coating additives, water and/or organic solvents E) at least one crosslinking agent module containing at least one crosslinking agent, optionally together with organic solvents."

The Office Action takes the position that Hellman et al. module A satisfies the requirements of Applicants' component (I), that Hellman et al. module B satisfies the requirements of Applicants' component (II), and that Hellman et al. module E satisfies the requirements of Applicants' component (III) in claims 1 and 21. The Office Action goes on to argue that the only new element of Applicants' claims is the phase stability requirements of claims

1 and 21, which the Office Action asserts is either inherent in the Hellman et al compositions or not enabled by Applicants' specification.

Applicants respectfully disagree with the Office Action's obviousness analysis. For an obviousness rejection to be proper, the Examiner must meet the burden of establishing that all elements of the invention are disclosed in the prior art; that the prior art relied upon, or knowledge generally available in the art at the time of the invention, must provide some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). "A patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art." *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1741 (2007). To find obviousness, the Examiner must "identify a reason that would have prompted a person of ordinary skill in the art in the relevant field to combine the elements in the way the claimed new invention does." *Id.*

In the present case, Applicants submit that the Hellmann et al. reference does not fairly suggest Applicants' claimed invention as a whole, and that the Office Action's case for obviousness relies on so many fortuitous choices of certain 'optional' components while at the same time relying on restrictions away from other 'optional' components in Hellmann et al.'s disclosure, that the choices would not have been obvious to one of ordinary skill in the art at the time Applicants' invention was made without the use of hindsight gleaned from Applicants' invention itself. Although Applicants acknowledge that any *ex post facto* analysis of the obviousness of a claimed invention in view of prior art necessarily entails some degree of hindsight, Applicants respectfully submit that it is improper to use hindsight as has been done by the Examiner to weave through a reference that discloses a large number of possible permutations of optional components in order to pick only the optional components that support the rejection while ignoring other optional components that would undercut the rejection.

For example, although Hellmann et al. do not disclose their adhesion-promoting component module B as being binder-free, as is required by Applicants' claimed invention, and in spite of the fact that the only working examples given by Hellmann et al. for module B include a methacrylate binder, the Office Action concludes that Hellmann et al. disclose a binder-free component module B because the reference describes the binder as "optional". At the same time,

the Office Action *includes* Hellmann et al.'s optional cross-linkable functional groups from module A (and then goes farther to pick hydroxyl functional groups out of the reference's shotgun disclosure of functional groups) in order to satisfy Applicants' claim requirement of a component that is curable with polyisocyanates.

In order to understand how fortuitous one's decisions must be in order to arrive at Applicants' claimed invention from the disclosure of Hellmann et al., it is helpful to examine the decision tree that is involved. First one must decide to make the system anhydrous. In this regard, Applicants note that Hellmann et al. never discloses a water-free system (i.e., "anhydrous") as claimed by Applicants. Hellmann et al. disclose that their system may be aqueous or solvent based, but nowhere do they teach that the solvent-based systems must exclude water, and in fact, most of the solvents they disclose are miscible with water. However, even assuming for the sake of argument that Hellmann et al.'s disclosure of solvent-based systems are intended to be water-free, one must still recognize that at least 50% of the systems encompassed by Hellmann et al.'s disclosure will be aqueous and clearly outside the scope of Applicants' claimed invention.

Now, among the remaining 50% of the systems encompassed by Hellmann et al.'s disclosure, one would have to pick the *optional* embodiment for Hellmann et al.'s module A of functionalizing the binder with cross-linkable groups versus the alternate option of no functional groups. Then, among the functionalized binders, one would have to pick only the isocyanate-reactive functional groups to arrive at Applicants' claimed invention, and not the others like unsaturated groups, epoxy, or acetacetyl. For Hellmann et al.'s module B, one would have to ignore the clear preference for binders stated in paragraph [0048] and choose a binder-free module B. Then, in order to arrive at Applicants' claimed invention, one would have to choose a chlorinated polyolefin adhesion promoter versus the alternate non-chlorinated adhesion promoter option disclosed at the bottom of paragraph [0045]. Lastly, one would have to decide to include the optional component E from Hellmann et al.'s disclosure, and then would have to choose isocyanate cross-linking agents from among the six crosslinking agents disclosed in paragraph [0059] of the reference.

One way to mathematically model the above-described decision tree would be as follows:

Solvent vs. aqueous

(0.5) x

Module A binder has functional groups reactive with isocyanate (versus other 2 options of non-functional or functionalized with non-isocyanate reactive groups)	(0.33) x
Module B is binder free	(0.5) x
Module B adhesion promoter is chlorinated	(0.5) x
Module E is present	(0.5) x
Module E crosslinker is isocyanate (out of 6 types disclosed)	<u>(0.167)</u>
	0.0034 = 0.34%

Although Applicants acknowledge that other methodologies could be used to arrive at different results, the above calculation that less than half a percent of the systems encompassed by Hellmann et al.'s disclosure exhibit the unique combination of elements claimed in Applicants' invention clearly illustrates the fortuitous nature of all of the selections that would have to be made from Hellmann et al.'s disclosure in order to arrive at Applicants' claimed invention. Applicants respectfully submit that the Examiner has the burden of providing analysis to support a conclusion of obviousness as to why one skilled in the art would be led to make the choices that would lead to Applicants' invention. Furthermore, Applicants respectfully point out that such analysis cannot rely on certain preferences of Hellmann et al. (e.g., where isocyanate is preferred as a crosslinking agent for module E) while conveniently ignoring others (e.g., the preference that module B includes a binder). Since such analysis has not been provided, Applicants submit that a case of *prima facie* obviousness has not been made.

In response, the PTO's Advisory Action states:

In response to applicant's arguments that the Office Action's case for obviousness relies on fortuitous choices of certain optional components while at the same time relying on restrictions away from other optional components, it is only necessary that module B not have optional binder and that optional module E be present. These two combinations result in four possible choices, 25% of which result in the claimed invention. Module A preferably contains hydroxyl groups as crosslinkable functional groups (§0025) and module E preferably contains isocyanate groups when used with the preferred binders (§0059). Furthermore, the examples use hydroxyl functional binders with chlorinated polyolefins and an isocyanate crosslinker. As far as solvent vs. aqueous, this choice is usually dependent on the application conditions or intended use. However, even assuming that this were a completely mathematical decision, there remain only two variable; presence or absence of binder in module B and choice of solvent. These variables yet again only result in four possible choices, 25% of which result in the claimed invention. While this analysis does rely on the fact that Hellmann prefers some embodiments, binder is not a required component of module B. As such, it is still proper to use Hellmann for all that it teaches, but not include one of the preferred components, as its presence is optional.

Applicants and the Undersigned appreciate the Examiner's remarks, but must respectfully submit that said remarks focus solely on 2 individual elements of Applicants' claimed invention. That is, the PTO's analysis fails to look at the *invention as a whole*. Applicants' claimed invention is not only component B w/o optional binder and the presence of component E. Rather, it is the fact that Applicants' unique combination of three particular components allows for a three-component system with desirable properties.

Moreover, the PTO has also failed to provide any motivation as to why one of skill in the art would do what Applicants have done. A prima facie case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art. *In re Rinehart*, 189 U.S.P.Q. 143 (CCPA 1976).

Lastly, with regard to amended claim 23, Applicants note that the “consisting of” language limits the claims to the three listed components. Since Hellmann et al. requires five components when module E is included to satisfy Applicants’ claim element (III), an obviousness rejection must include reasoning why it would be obvious to delete the extra elements of Hellmann et al., which analysis has not been provided.

The remaining pending claims not discussed above (claims 3-5, 7-10, 12-20, and 22) each depend on a claim (claim 1 or 21) that Applicants have shown above to be patentable. Accordingly, Applicants submit that these dependent claims are patentable as well, for at least the reasons discussed above.

## CONCLUSION

Applicant(s) respectfully submit that the Application and pending claims are patentable in view of the foregoing amendments and/or remarks. A Notice of Allowance is respectfully requested. As always, the Examiner is encouraged to contact the Undersigned by telephone if direct conversation would be helpful.

Respectfully Submitted,

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